In the Specification:

On page 16, please replace existing paragraph **[0072]**, lines 17-23, with the following replacement paragraph **[0072]**:

[0072] While the embodiment illustrated in ~~**FIG. 12 and FIGS. 13A-13F**~~ **FIG. 1 and FIGS. 2A-2E** represents a preferred fluidic device, one skilled in the art will recognize that devices according to a wide variety of other designs may be used, whether to perform parallel liquid chromatography or other fluid phase separation processes. For example, other functional structures, such as, but not limited to, sample preparation regions, fraction collectors, splitters, reaction chambers, catalysts, valves, mixers, and/or reservoirs may be provided to permit complex fluid handling and analytical procedures to be executed within a single device and/or system.

On page 18, please replace existing paragraph **[0079]**, lines 6-21, with the following replacement paragraph **[0079]**:

[0079] The flow-through detection subsystem 102 may be adapted to perform any suitable type of flow-through detection. Preferred flow-through detection methods include absorbance detection and fluorescence detection. As illustrated, the flow-through detection subsystem 102 includes a radiation source 132, optical elements 134, a wavelength selection element (or, if fluorescence detection is used, interference filter) 136, optional additional optical elements 138 (possibly including a fiber optic interface), flow cells 140, and optical detectors 141. One or more common reference signals may be provided to one or more sensors of the detectors 141. If absorbance (e.g., UV-Visible) detection is used, then the flow cells 140 preferably include an enhanced optical path length through the effluent streams received from the columns 120A-120X. The detectors 141 preferably include multiple sensors disposed in a two-dimensional array. In one example, the detectors 141 are embodied in a multianode photomultiplier tube having sensors disposed in an 8x8 anode array, Hamamatsu model H7546B-03 (Hamamatsu Corp., Bridgewater, NJ). Further details regarding flow-through detection systems are provided in commonly

assigned U.S. patent application no. 10/699,533 filed October 30, 2003 and no. 60/526,916 (attorney docket 140(P)) filed December 2, 2003, both of which are hereby incorporated by reference.

On pages 24-25, please replace existing paragraph **[0099]**, beginning at line 14 on page 24 and ending on line 5 on page 25, with the following replacement paragraph **[0099]**:

[0099] Physical interaction (i.e., collision between ions in the ion streams due to dispersion at the ionizer) may be minimized by providing sufficiently precise focusing elements 236A-236X to focus ion streams before they have the opportunity to disperse over the distance between adjacent channels 232A-232X. The dimensions of conventional focusing elements 236A-236X are such that the distance between channels 232A-232X, which is dictated by the physical constraints of the focusing elements 236A-236X, is typically larger than the dispersal permitted by such elements 236A-236X. Of course, more advanced or miniaturized focusing elements ~~236A236X~~ 236A-236X may allow a higher channel density; however, the precision of the focusing elements ~~236A236X~~ 236A-236X may be adjusted accordingly if necessary.

On page 25, please replace existing paragraph **[00100]**, lines 6-11, with the following replacement paragraph **[00100]**:

[00100] Referring to Table 2, for a 0.1 cm diameter detection region, in order to keep the deflection ~~below at or below~~ within about one percent of the total detector area of a transducer, each detector needs to be at least about one centimeter apart. Therefore, in a preferred embodiment, each detector is at least about one centimeter apart from every other detector. In a more preferred embodiment intended to further reduce deflection, each detector is at least about two centimeters apart from every other detector.

On pages 27-28, please replace existing paragraph **[00106]**, beginning at line 28 on page 27 and ending on line 14 on page 28, with the following replacement paragraph **[00106]**:

[00106] The spectrometer 500 preferably includes multiple vacuum pump stages 549A-549B. While only two vacuum pump stages 549A, 549B are illustrated, more vacuum stages may be provided. Preferably, differential levels of vacuum are maintained within the spectrometer 500, with progressively higher levels of vacuum being maintained along the direction of each ion path 511A-511X. In other words, a lower level of vacuum may be maintained within the enclosure 519 adjacent to the sample inlets 503A-503X than adjacent to the transducers 508A-508X. To facilitate the maintenance of different vacuum states, the enclosure 519 is preferably partitioned into multiple subchambers using internal partitions or baffles 538 disposed substantially perpendicular to the ion paths 511A-511X. As illustrated, partition elements 538 may be disposed between various guide members 531A-531X, 535A-535X. The guide members 531A-531X, 535A-535X preferably define passages 532A-532X, 536A-536X to permit fluid (vacuum) communication with a common vacuum stage 549. Each module 510A-510X preferably includes partitions or baffles 507X-507X corresponding to the partition elements 538, and includes passages or other openings (as described previously) also in communication with the vacuum stage 549. Thus, both the enclosure 519 and modules 510A-510X include appropriate physical baffles or partitions ~~438, 407A-407X~~ 538, 507A-507X for maintaining differential levels of vacuum within the spectrometer 500 using a minimum number of (e.g., common) vacuum pump stages 549A, 549B. Seals 533A-533X, 537A-537X within the enclosure 519 between the partitions 538 and the modules 510A-510X prevent vacuum leaks and facilitate maintenance of differential vacuum conditions.

On page 29, please replace existing paragraph **[00111]**, lines 17-33, with the following replacement paragraph **[00111]**:

[00111] In one embodiment, fluid connections between multiple fluid phase separation process regions and a modular multi-analyzer spectrometer are provided with minimal and substantially equal path lengths. To facilitate minimal and substantially equal path lengths, a preferred arrangement for the analyzer modules is in a spatially compact two-dimensional array. Multi-analyzer spectrometers 550, 560 having large numbers of modules disposed in one-dimensional and two-dimensional arrays, respectively, are illustrated in **FIGS. 9A-9B**. In **FIG. 9A**, a spectrometer 550 includes twenty-four modules 551A-551X disposed in a single row. Particularly if the spectrometer 550 is interfaced with an external microfluidic fluid phase separation device (such as the device 400 described previously in connection with **FIG. 1** and **FIGS. 2A-2E**) substantially smaller than the spectrometer 550, then to provide equal length ~~interfaces~~ fluidic interfaces for each process region and corresponding module 551A-551X many interfaces would be needlessly long. A preferred spectrometer with a more efficient module layout is provided in **FIG. 9B**. With the modules 561A-561X disposed in a two-dimensional array (e.g., six rows of four columns, although any number of alternative row and column arrangements may be provided) having multiple rows and multiple columns, much shorter equal-length interfaces can be provided between the spectrometer 560 and an upstream fluid phase separation device 400.

On pages 30-31, please replace existing paragraph **[00114]**, beginning at line 23 on page 30 and ending on line 9 on page 31, with the following replacement paragraph **[00114]**:

[00114] In still other embodiments, mass spectrometers may be fabricated with modular sub-assemblies each containing components for multiple analyzer channels such as illustrated in **FIGS. 12A-12B**. A mass spectrometer 700 includes a first subassembly 701 having multiple analysis channels 702A-702X and vacuum ports 704A-704D. Each channel 702A-702X includes a mass analyzer of any suitable type and desirable related components. A multistage vacuum system 706 including pumps 706A, 706B ~~may be~~ may be provided in fluid (vacuum) communication with one set of

vacuum ports 704A, 704B while another set of vacuum ports 704C, 704D may be sealed with caps 708A, 708B. In the event that it is desired to add additional analysis channels to provide higher throughput, an additional subassembly 711 may be provided, such as illustrated in **FIG. 12B**. The additional subassembly 711 includes multiple analysis channels 712A-712X and vacuum ports 714A-714D. The two subassemblies 701, 711 are oriented such that vacuum ports 714A, 704B disposed along the bottom of the second subassembly 711 mate with corresponding vacuum ports 704C, 704D disposed along the top of the first subassembly 701 (following removal of the caps 706A, 706B). The caps 706A, 706B are then relocated and positioned to seal the vacuum ports 714C, 714D disposed on top of the second subassembly 711. In this manner, the multi-stage vacuum pumps 706A, 706B may be used to evacuate both the first and second subassemblies 701, 711. Any desirable number of subassemblies 701, 711 may be stacked to provide the desired number of analysis channels. The vacuum system 706 may also be augmented as necessary to maintain desired levels of vacuum within the system 700.

In the Drawings

Please replace Figure 6, drawing sheet 10/17 as originally filed with replacement Figure 6, new sheet 10/17 attached hereto, wherein reference numeral "250N" is changed to "250X."